

Rare and Declining Species in Idaho: An Assessment and Recommendation to the Idaho Legislature

DRAFT

March 7, 2006

Prepared by the
Idaho Governor's Office of Species Conservation
James L. Caswell, Administrator
300 North Sixth Street
Boise, Idaho 83702
(208) 334-2189

Governor's Office of Species Conservation's responsibility as directed by 67-818(4) Idaho Code:

The governor's office of species conservation shall prepare a report to the legislature recommending a plan to develop state conservation assessments and strategies for rare and declining species in the state of Idaho and submit that report and recommendation to the legislature. The report and recommendation are subject to legislative approval, amendment, or rejection by concurrent resolution.

Idaho Department of Fish and Game Commission's responsibility as directed by 36-103 Idaho Code:

All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed.

The definition of wildlife in 36-202 Idaho Code is:

"Wildlife" shall mean any form of animal life, native or exotic, generally living in a state of nature.

Idaho Department of Fish and Game responsibility as directed by 18-3913 Idaho Code:

In determining additions to the list of wildflowers set forth herein, the Department of Fish and Game may take into consideration: The necessity to preserve and protect native plants whenever it appears that they might possibly become extinct.

Table of Contents

1. Why this report?	Page 4
2. Background on fish and wildlife management in Idaho, including rare and declining species	Page 6
3. The Idaho Comprehensive Wildlife Conservation Strategy	Page 7
4. Recommendation	Page 9
5. Attachment 1. Description of the Idaho Comprehensive Wildlife Conservation Strategy	Page 11
- Example From the Strategy: Okanogan Highlands Section	Page 15
6. Attachment 2. From the Strategy: Appendix B, Rare and Declining Species	Page 22

1. Why this report?

The Governor's Office of Species Conservation (OSC) was created within the Executive Office of the Governor in the 2000 Idaho Legislative Session with the passage of Senate Bill 1490 (§ 67-818, Idaho Code). OSC is dedicated to planning, coordinating, and implementing the State's actions to preserve, protect, and restore species listed as threatened or endangered under the federal Endangered Species Act (ESA). This work is done through coordination with State natural resource agencies and input of Idaho citizens, while taking into consideration the economic vitality of the State. The core functions of OSC, and the corresponding code sections, are as follows:

- 1) **Coordinate** federal ESA programs with State agencies (§ 67-818).
- 2) **Solicit**, provide, and delegate funding for ESA programs (§ 67-819).
- 3) **Negotiate** agreements with federal agencies concerning endangered species (§ 67-818 2(f)).
- 4) **Serve** as the State's "one-voice" on ESA policy (§ 67-818, 2(a)).
- 5) **Provide** a mechanism for Idaho citizens to voice ESA concerns (§ 67-818, 2(g)).
- 6) **Facilitate** collaboration between State, federal, and private stakeholders (§ 67-818, 2(b)(c)(d)(g)).

In addition to these responsibilities, OSC is mandated to:

- 7) **Prepare** a report to the legislature recommending a plan to develop state conservation assessments and strategies for rare and declining species in the State of Idaho and submit that report and recommendation to the legislature. The report and recommendation are subject to legislative approval, amendment, or rejection by concurrent resolution (§ 67-818, 4).

This is the first report OSC has prepared to fulfill its mandate under core function number 7. Until recently, OSC has focused on carrying out the first six of our legislative mandates. The State's concerns have been on species that were currently on, or were targeted for listing under the ESA. In Idaho there are 21 species listed as threatened or endangered, and 6 species that are candidate or potentially-listed species:

Listed Species:

- Woodland Caribou (Endangered)
- Sockeye Salmon (Endangered)
- White Sturgeon (Endangered)
- Banbury Springs Limpet (snail, Endangered)
- Bruneau Hot Springsnail (Endangered)
- Desert Valvata (snail, Endangered)
- Idaho Springsnail (Endangered)
- Snake River Physa (snail, Endangered)
- Gray Wolf (Threatened / Endangered)
- Grizzly Bear (Threatened)
- Lynx (Threatened)
- Northern Idaho Ground Squirrel (Threatened)

- Bald Eagle (Threatened)
- Bull Trout (Threatened)
- Chinook Salmon (Threatened)
- Steelhead (Threatened)
- Bliss Rapids Snail (Threatened)
- MacFarlane's Four-o'clock (plant, Threatened)
- Spalding's Catchfly (plant, Threatened)
- Ute Ladies' Tresses (plant, Threatened)
- Water Howelia (plant, Threatened)

Candidate Species:

- Columbia Spotted Frog
- Slickspot Peppergrass (plant)
- Yellow-billed Cuckoo
- Southern Idaho Ground Squirrel
- Christ's Indian Paintbrush (plant)
- Linear Leaf Moonwort (plant)

OSC's priority has been to develop programs to conserve and restore listed species while minimizing impacts to Idahoans' way of life. As Idaho's rapid growth continues there is increasing pressure on our natural resources, including rare and declining species. The most eminent threats to Idahoans' way of life comes from listed and candidate species, as they are protected by federal law, and sanctions can occur if a listed species is taken or their habitat harmed. Indeed, the first few years of OSC's operations involved assisting Idahoans in avoiding lawsuits and restrictions on uses of their land or water while promoting conservation.

The next step was for the State to develop long-term plans for the protection of listed species as well as the protection of Idaho's land and water users and our natural resource economies. To this end OSC has been very successful in coordinating, negotiating, and facilitating the efforts of state and federal agencies, local governments, private landowners and businesses, and other interested parties to accomplish the following:

- Obtained State management of the gray wolf;
- Provided data to support delisting of bull trout in Idaho;
- Developed water conservation program for chinook salmon and steelhead in the Clearwater / Salmon basins;
- Developed agreement to prevent listing of slickspot peppergrass;
- Developed statewide conservation plan for sage-grouse;
- Petitioned Fish & Wildlife Service to delist Idaho springsnail; and
- Secured multiple sources of funding for on-the-ground-restoration activities.

After several years of a reactive "put out the fire" strategy, the State now needs to turn its attention to other species that may be in peril -- rare and declining species. This could be called the State's proactive "prevent the next fire" strategy, or a strategy to prevent rare and declining species from being considered for ESA listing in the first place. The Idaho Legislature had the foresight to include the rare and declining species mandate into OSC's statute in

2005. For a number of years prior to the establishment of OSC, the Idaho Legislature had wrestled with the problems of the ESA and how to avoid listings of species in the first place. This concern was combined with an understanding that all species, including fish, wildlife, and plants, should be sustained.

What about those species that may be in decline but can be recovered? How does the State prevent species getting to the point of potential listing under the ESA? How does the State gain reliable knowledge about nongame wildlife and native plants, given that species have been listed under the ESA simply because little was known about their abundance? What financial resources does Idaho have to conserve rare and declining wildlife and native plants? This report explores these questions and suggests a process whereby the Idaho Legislature can explore their policy implications.

2. Background on fish and wildlife management in Idaho, including rare and declining species

State fish and wildlife agencies, like the Idaho Department of Fish and Game (IDFG), have historically had primary responsibility for fish and wildlife conservation programs. Traditionally, most of the attention and knowledge has been focused on the “managed” or “game” species, those that are hunted, trapped, or fished. However, the number of “unmanaged” species is much larger, and much less is known about them. More than 80% of the fish and wildlife species in Idaho are considered nongame species – 523 species including songbirds, fish, small mammals, reptiles, and amphibians.

State fish and wildlife programs have traditionally been funded by hunting, trapping, and fishing revenues and by the Federal Aid in Wildlife Restoration Act (i.e., Pittman–Robertson Act) in 1937, the Federal Aid in Sport Fish Restoration Act (i.e., Dingell–Johnson Act) in 1950, and the Aquatic Resources Trust Act (Wallop–Breau Amendment) in 1984. These programs have provided the primary financial support for game management in Idaho and throughout the country. In Idaho these funding sources total about \$40 million per year.

Programs designed to benefit and enhance game species have benefited many nongame species. Activities such as protecting, creating and improving habitat, enforcing wildlife laws, and protecting water quality, have benefited all fish, wildlife, and native plants in certain areas. Although these programs have had many successes, some species have continued to decline. Additional funding sources have provided some assistance in addressing the need for support of rare and declining species. For example, the Endangered Species Act (ESA) provides a limited amount of funding to states to focus on recovery of federally listed species.

In 1981 the Idaho Legislature amended Idaho Code to create a voluntary nongame income tax check-off. Donated monies were placed into the Fish and Game Trust Account to be used “for the purpose of management and protection of nongame species of wildlife in this state.” The Idaho Wildlife License Plate bill

passed by the 1992 legislature dedicated a portion of the Bluebird Plate proceeds to the Nongame Wildlife Program. The Idaho Wildlife License Plate Bill was amended in 1998 and 2003 to add the Elk and Cutthroat Trout Plates, respectively. The formula for distribution of fees for all specialized license plates was modified in 1998, resulting in increased revenue to the Nongame Wildlife Program from wildlife license plates. Currently, the income to the nongame fund from the income tax check-off, license plates, and donations is about \$1 million per year. The Nongame Wildlife Program's focus is three-fold: (1) species conservation, with an emphasis on those at risk of being listed as threatened or endangered, (2) watchable wildlife, and (3) conservation education.

In 2001 the U. S. Congress began to provide federal funds through a "Wildlife Grants" program for states to begin to develop a program for rare and declining wildlife species. In Idaho it has been about \$800,000 per year. These wildlife grants require a 50-50 match of non-federal funds. These grants cannot be used for plants. Nongame funds are used to match these wildlife grants, so the total funding available from these sources for nongame and rare and declining wildlife species programs in Idaho is about \$2 million per year.

Even with the development of these programs, Idaho's (and many other states) funding of rare and declining species programs for both plants and animals is not adequate. This has resulted in efforts that are more opportunistic rather than strategic, especially for rare and declining species that are not yet listed as endangered or threatened, and for plant species. For the future of fish, wildlife, and native plants in Idaho, and to prevent future federal listings of these species, a strategic approach is needed to conserve all species.

3. The Idaho Comprehensive Wildlife Conservation Strategy

Congress was aware of the funding dilemma facing the states regarding nongame wildlife. To shed more light on the subject, Congress asked all states to develop a "Comprehensive Wildlife Conservation Strategy" (CWCS, or Strategy) in order to continue receiving wildlife grants and demonstrate the need for these grants. Each state fish and wildlife agency –here, IDFG – was to coordinate this effort in compliance with their mandates to protect and manage all of the State's fish and wildlife resources.

Congress had the wisdom to make this program non-regulatory -- it is neither the Endangered Species Act, nor is it The Clean Water Act. Congress clearly stated that the Strategy:

- Should be developed to aid species with conservation needs before populations decline and listing under the ESA may be warranted;
- Should be a strategy, not a plan;
- Should be voluntary, not mandatory; and
- Should be for anyone's use in conserving rare and declining wildlife in Idaho.

Early in the development of the Strategy, IDFG established a Leadership Committee to provide guidance and advice. The Leadership Committee (for membership, see Attachment 1 page 11) emphasized the importance of the points outlined above. The Idaho Strategy was developed around those concepts. Throughout the development of the document, it has been emphasized that it is a strategy, not a plan. It is not regulatory and is not prescriptive. The recommended actions in the Strategy are general, and the development of conservation plans is undertaken voluntarily by willing partners.

First and foremost the Idaho Strategy is a technical document, a source of information on rare and declining wildlife and habitat in the state. As the lead, IDFG compiled the best available scientific information on rare and declining wildlife. Existing information contained in scientific papers, reports, and databases were brought together and put in one place and organized in a format that made sense for Idaho's varied habitats and geography. A summary of the Strategy is included in Attachment 1.

The Strategy identifies 229 wildlife species of greatest conservation need – rare and declining species. For a further breakdown, please see Attachment 1, page 11. For these species, the Strategy provides the following:

- provides information on the life history and habitat needs of species to aid in the consideration of conservation actions;
- recommends voluntary actions to improve the population status and habitat conditions of the species;
- recommends an approach for long-term monitoring to assess the success of conservation efforts and to integrate new information as it becomes available;
- complements other conservation strategies, funding sources, and planning initiatives;
- incorporates public participation throughout the development and implementation of any conservation planning; and
- provides a clear process for reviewing and revising the Strategy to address changing conditions and new information.

The idea behind the Strategy is to bring together, and to develop in the future, the best information on rare and declining wildlife species and their habitats in Idaho. With the best available information, the public and policy makers can make more informed decisions on our native fish and wildlife. For example, with this information OSC can work with private landowners to implement voluntary on-the-ground projects to preserve rare and declining species and avoid the potential impacts of ESA listing. In Idaho, collaborative conservation efforts are coordinated through OSC. Under the auspices of the Governor, the OSC brings together the interested and affected parties to develop conservation plans, ensure that the needs of fish, wildlife, and people are taken into consideration, and ensure that the plan is implemented. This process has proven to be successful in developing conservation plans for slickspot peppergrass, Chinook salmon in the Lemhi River, Yellowstone grizzly bear, sage grouse, and gray wolf.

The Idaho Strategy is not a policy document. It is a tool to help policy and decision makers arrive at informed decisions concerning rare and declining species at all levels from a private landowner to the Governor's office. Conserving rare and declining wildlife must be a collective endeavor of Idaho's conservation partners, including state, federal, and tribal agencies, local governments, conservation organizations, universities, industry, and private landowners.

The public has had, and will have, opportunities to be involved in the development and implementation of the Idaho Strategy. Affected publics will be involved in the development of conservation plans, a process facilitated by the OSC. Interested publics will be able to participate in on-the-ground conservation efforts, like habitat enhancement projects and inventory and monitoring. The Strategy will be continually updated as new information is collected regarding the status of the species.

OSC and IDFG are an effective team that works closely on ESA and rare and declining species issues. IDFG provides excellent technical support and assistance on the biological aspects of species conservation. OSC provides the policy and political perspective and brings together the interested and affected parties to devise solutions that meet the needs of the species and the people of the State. OSC and IDFG support the purpose and intent of the Strategy and recognize the need to develop a companion strategy for rare and declining plant species. The goal is to provide information and a framework to develop and implement plans for the benefit of rare and declining species of fish, wildlife and native plants.

4. Recommendation

Two similar but separate projects have merged as a result of their mutual goals: OSC's effort to investigate and create a dialogue for all Idahoans on a rare and declining species policy for Idaho, and IDFG's efforts to identify these species and develop an information base needed to conserve them through the Strategy. These two projects have a common goal; preserve Idaho fish and wildlife and prevent future ESA listings.

Much remains to be done. Rare and declining native plants should be added to the Strategy. A state policy and approach for conserving rare and declining wildlife and native plants needs to be developed and implemented. For any program for rare and declining species, it is essential that Idahoans, including the Idaho Legislature, have a thorough understanding of the issues, as well as the ability to provide input into conservation planning processes. A long-term policy for the State of Idaho on rare and declining species should have a thorough vetting, and a thorough understanding of the issues.

OSC Recommendation. *OSC recommends the Idaho Legislature establish a Task Force to fully explore the issues surrounding rare and declining species.*

This will allow the Legislature and their constituents, the time and capacity to thoroughly investigate the rationale for a rare and declining policy for Idaho, and how the programs of OSC and IDFG can fulfill those needs.

Attachment 1.

Description of the

Idaho Comprehensive Wildlife Conservation Strategy

The Strategy may be viewed in full at the Idaho Department of Fish and Game's website at <http://fishandgame.idaho.gov/>, or a CD is available upon request.

The Eight Required Elements to include in Comprehensive Wildlife Conservation Strategies

Congress identified eight required elements to be addressed in these wildlife conservation strategies. Further, the strategy must identify and be focused on the "species in greatest need of conservation," yet address the "full array of wildlife" and wildlife-related issues. They must provide and make use of:

- (1) Information on the distribution and abundance of species of wildlife, including low and declining populations as the State fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the State's wildlife; and,
- (2) Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1); and,
- (3) Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats; and,
- (4) Descriptions of conservation actions proposed to conserve the identified species and habitats and priorities for implementing such actions; and,
- (5) Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions; and,
- (6) Descriptions of procedures to review the strategy at intervals not to exceed ten years; and,
- (7) Plans for coordinating the development, implementation, review, and revision of the plan with federal, state, and local agencies and Indian tribes that manage significant land and water areas within the State or administer programs that significantly affect the conservation of identified species and habitats.
- (8) Congress also affirmed through this legislation, that broad public participation is an essential element of developing and implementing these

strategies, the projects that are carried out while these strategies are developed, and the Species in Greatest Need of Conservation that Congress has indicated such programs and projects are intended to emphasize.

Idaho Comprehensive Wildlife Conservation Strategy Leadership Committee

Early in the process of developing the CWCS the IDFG established a Leadership Committee. The membership of the Committee was based on a representative group of agencies and entities that would likely use or implement the CWCS. The group size needed to be small enough to be workable yet represent the variety of interests in the state. The Committee was composed of representatives of:

USDA Forest Service
Idaho Legislature
Idaho Association of Counties
Intermountain Forest Association
USDI Fish and Wildlife Service
Governor's Office of Species Conservation
USDI Bureau of Land Management
Office of Governor Dirk Kempthorne
The Nature Conservancy
Private ranching community
Idaho Conservation League
University of Idaho
Idaho Council on Industry and the Environment
Idaho State Department of Agriculture
Idaho Department of Lands

The purpose of the committee was to:

1. Inform key individuals about the CWCS. Inform those who were likely to use, implement, or be affected by the CWCS to be aware that it was being prepared, who was preparing it, and how it was being done.
2. Provide suggestions and advice on the CWCS as it was being developed.
3. Disseminate information and receive feedback from other stakeholders on the strategy.

The Committee met four times: June 2004, December 2004, June 2005, and September 2005. The first meeting was an introduction to the CWCS, the timetable for preparation, and how it would be developed. The remaining three meetings were updates on progress. At all the meetings, issues that concerned members were identified and discussed. The key issues that emerged from discussions of the Leadership Committee included how species were selected, how threats and conservation actions were described, the use of predicted distribution maps, dealing with species for which there is little information, how to

use the CWCS and how not to use it, and the difference between a strategy and a plan.

Much of the advice and suggestions of the Committee members were incorporated into the development of the CWCS.

The Strategy is organized into six chapters and eight appendices.

Chapter 1, “Introduction and Purpose” outlines the purpose of the Strategy, provides background information on why each state is developing a Strategy, and lists the eight elements defined by Congress that each state is required to address in their strategies.

Chapter 2, “Approach and Methods” outlines the process used to develop the Strategy, how Idaho identified rare and declining species, the prioritization process, public involvement and partnership, coordination, and the process intended to review and revise the Strategy.

Chapter 3, “State Overview” provides an overall summary of the physical characteristics of the State of Idaho, key issues in the State, the priority sections and habitats, a detailed account of the habitats in the State with a general description and relative condition of the habitats, and the issues and actions associated with species’ habitats. This section also provides reference to the full array of wildlife in the State as well as the rare and declining species that were identified during the development of the Strategy. This section also includes a series of maps of the State depicting counties, land ownership, topography, climate, geology, land use, ecological regions, managed areas, roads, and habitats.

Chapter 4, “Ecological Section Conservation Priorities” describes the 14 ecological sections in Idaho. Climate, elevation, rainfall and topography all make for varied ecological sections in the State. The concept of describing all wildlife, including rare and declining species, in ecological sections is with the intent of further describing localized conditions and habitats. Each of the 14 ecological sections includes a general description, a land use and land ownership summary, a list of priority habitats in the section, and a listing of the rare and declining species for each habitat.

As an example, OSC has attached to this report the “*Okanogan Highlands Section*,” page 15. This ecological section is the northernmost section of Idaho.

Chapter 5, “Monitoring and Adaptive Management” outlines an approach for monitoring species, habitats, and the effectiveness of the conservation actions.

Chapter 6, “Strategy Review and Revision” describes the process for updating and revising the document. The Strategy will be considered a “living document,” as it will be revised as new information regarding species abundance, range, or

other information becomes available. Every five years an in-depth review will be undertaken, with input from all interested parties.

“Appendix B” lists all of the rare and declining species and their respective status. In this report, OSC included this as *“Attachment 2. From the Strategy: Appendix B, Rare and Declining Species.”* Page 22. An overview of the species ranking process is included.

Summary of Species Included in the Comprehensive Wildlife Conservation Strategy

In Idaho, there are a total of 1191 known animal species (vertebrate and invertebrate):

- 619 vertebrate species
 - fish
 - amphibians
 - reptiles
 - birds
- 572 invertebrate species
 - snails
 - crustaceans
 - insects

Of the 1191 known species in Idaho, a total of 229 species (103 invertebrates, 126 vertebrates) were identified as Species of Greatest Conservation Need, which means essentially the same thing as “rare and declining species”. (Attached.) Of these, 64 species (44 invertebrates, 20 vertebrates) lacked essential information pertaining to their status in Idaho. Therefore, their “primary conservation need” is more population information. For the remaining 165 species (60 invertebrates, 105 vertebrates) there is enough information to determine their status in the State, identify conservation issues, and recommend conservation actions.

“Appendix F, Species Accounts” is a brief description of each of the rare and declining species. These include the following information:

- The common name and scientific name for each species;
- reasoning for inclusion on the rare and declining species list (a brief statement that describes why the species was identified as a species of greatest conservation need, e.g., status under the Endangered Species Act, high threats, declining trend, isolated populations, restricted distribution, etc.);
- relevant scientific notes;
- information on the distribution and abundance;
- population status and trend (e.g., increasing, decreasing, stable, unknown);
- brief summary of the life history and habitat requirements of each species;
- key issues facing the species in Idaho; and
- recommended conservation actions.

Following the narrative information is a distribution map of the species. The purpose of the maps is to show the distribution of a species in the State, given what is known at this time. Included are both the predicted range and the known point locations to provide a visual picture of what we know, where there are gaps in the data, and where there is a need to prioritize areas for more investigation. Continued investigation of the species will ultimately remove species from the list, as well as perhaps adding some.

From the Strategy: Okanogan Highlands Section

The following 7 pages are taken from the Strategy as an example of the descriptions of each of the 14 ecological sections described in the document. This section describes the Okanogan Highlands Section of Idaho; roughly the area from the city of Post Falls on up to the Canadian border. Each of the 14 sections has the same format.

Climate, elevation, rainfall and topography all make for varied ecological sections in the State. The concept of describing all wildlife including rare and declining species in ecological sections is with the intent of further describing localized conditions and habitats. Each of the 14 ecological sections is organized by a general description, a land use and land ownership summary, a list of habitats in the section, and a listing of the rare and declining species in that area.

First is a narrative generally describing the area, including the descriptions of major waterbodies such as Lake Pend Oreille. This narrative also describes the climate, annual precipitation and temperature.

Next is a listing of tables which describe land use, land ownership.

Following the tables is the listing of rare and declining species, referred to as "Species of Greatest Conservation Need in the Okanogan Highlands." The superscript ^a denotes species for which this range represents a significant portion of their Idaho range.

After the listing of rare and declining species comes a description of the various "habitats" within the section. This is followed by a list of the rare and declining species is found in these habitats.

Okanogan Highlands Section

This is a mountainous area in which glacial lakes, rivers, and streams are prevalent. Rivers and streams are rapid-flowing, particularly during spring runoff. The Pend Oreille River, Pend Oreille Lake, and Priest Lake are major waterbodies. Creeks are prevalent, and many flow through glacial outwash and debris material within narrow valleys, and glacial lakes and wet meadows are also common. Rock strata are characterized by extreme metamorphism and deformation, and deposits of glacial till, outwash, and debris cover much of the landscape.

The climate is maritime-influenced. Precipitation occurs mostly as snow; the area receives 76 to 203 cm (30–80 in) of precipitation per year. Rain on snow is common at lower elevations. June and July are wet months, and the months of August through November are dry. Annual average temperature ranges from –1°–14°C (30°–58°F), with a mean temperature of 7°C (44°F). Warmest months are late July through August. The growing season varies with elevation, lasting 45 days at the highest elevations and up to 140 days in lower valleys.

Communities are mostly small and rural, but populations and development in some municipalities have been greatly increasing during recent years. Sandpoint, Bonners Ferry, and Post Falls are the largest population centers. Summer residences are common at lakes and large river systems. Forestry, livestock grazing, mining, and localized agriculture are principal land uses. Participation in outdoor recreation is rapidly increasing.

Table 1. Okanogan Highlands land use and land ownership.

Land use	Area (ha)	Area (ac)	Percent
Dryland Agriculture	185,013	457,176	28
Timberland	394,573	975,007	59
Rangeland	39,325	97,174	6
Urban	6847	16,920	1
Water	46,506	114,919	7
Total	672,265	1,661,195	100

Land ownership	Area (ha)	Area (ac)	Percent
USDI Bureau of Land Management	7250	17,915	1
USDA Forest Service	205,736	508,383	31
Open water	50,787	125,497	8
Private	299,410	739,854	45
State of Idaho	107,994	266,857	16
USDI Fish and Wildlife Service	1087	2685	<1
Total	672,263	1,661,192	100

Okanogan Highlands Ecological Section Habitats



Habitats

- Arableland
- Dry Conifer Forest
- Dry Grassland
- Dune, Canyon, and Rockland
- Mesic Deciduous Shrubland
- Northern Mesic Conifer Forest
- Open Water
- Riparian Woodland
- Southern Xeric Shrubland and Steppe
- Subalpine Forest
- Subalpine Grassland
- Upland Deciduous Forest
- Urban

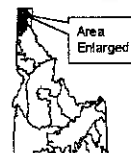
Town Population

- 0 - 20,000
- 20,001 - 200,000

Highways

- Interstate
- U.S. Highway
- State Route

IDAHO



15 September 2005
Mapa Composita: Data Center, Idaho Department of Fish and Game

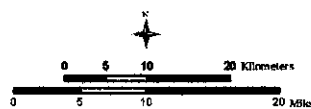


Figure 11. Okanogan Highlands habitats.

Species of Greatest Conservation Need in the Okanogan Highlands

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*^a
Lake Chub *Couesius plumbeus*^a
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*^a
Inland Redband Trout *Oncorhynchus mykiss gairdneri*
Kokanee *Oncorhynchus nerka*^a
Pygmy Whitefish *Prosopium coulterii*^a
Bull Trout *Salvelinus confluentus*^a
Burbot *Lota lota*^a

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*^a
Coeur d'Alene Salamander *Plethodon idahoensis*

Reptiles

Northern Alligator Lizard *Elgaria coerulea*

Birds

Northern Pintail *Anas acuta*^a
Lesser Scaup *Aythya affinis*
Harlequin Duck *Histrionicus histrionicus*^a
Hooded Merganser *Lophodytes cucullatus*^a
Common Loon *Gavia immer*^a
Red-necked Grebe *Podiceps grisegena*^a
Western Grebe *Aechmophorus occidentalis*^a
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Upland Sandpiper *Bartramia longicauda*
Long-billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*^a
Flammulated Owl *Otus flammeolus*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Lewis's Woodpecker *Melanerpes lewis*
White-headed Woodpecker *Picoides albolarvatus*

American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*^a

Mammals

Pygmy Shrew *Sorex hoyi*^a
Merriam's Shrew *Sorex merriami*^a
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*^a
Northern Bog Lemming *Synaptomys borealis*^a
Gray Wolf *Canis lupus*
Grizzly or Brown Bear *Ursus arctos*^a
Fisher *Martes pennanti*^a
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*^a
Mountain Goat *Oreamnos americanus*

Gastropods

Sheathed Slug *Zacoleus idahoensis*

Insects

A Stonefly *Pictetiella expansa*^a

^a Species for which the Okanogan Highlands represents a significant portion of their Idaho range.

Habitats in the Okanogan Highlands

Table 2. Okanogan Highlands habitats.

Habitat	Area (km ²)	Area (ac)	Percent
Urban	61	14,994	1
Arableland	483	119,467	7
Upland Deciduous Forest	304	75,197	5
Dry Conifer Forest	1648	407,175	25
Northern Mesic Conifer Forest	1410	348,217	21
Subalpine Forest	1009	249,450	15
Mesic Deciduous Shrubland	358	88,425	5
Dry Grassland	416	102,788	6
Subalpine Grassland	117	28,815	2
Open Water	514	127,023	8
Riparian Woodland	204	50,392	3
Dune, Canyon, and Rockland	199	49,259	3
Total	6723	1,661,202	100

Priority Habitats and Associated Vertebrate Species in the Okanogan Highlands

Arableland

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Burbot *Lota lota*

Birds

Northern Pintail *Anas acuta*
Merlin *Falco columbarius*
Long-billed Curlew *Numenius americanus*

Dry Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Lake Chub *Couesius plumbeus*
Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Grasshopper Sparrow *Ammodramus savannarum*

Mammals

Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*

Caribou *Rangifer tarandus*
Mountain Goat *Oreamnos americanus*

Northern Mesic Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Lake Chub *Couesius plumbeus*
Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*
Burbot *Lota lota*

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*

Subalpine Forest

Fishes

Lake Chub *Couesius plumbeus*
Burbot *Lota lota*

Amphibians

Wood Frog *Rana sylvatica*

Birds

Bald Eagle *Haliaeetus leucocephalus*
Boreal Owl *Aegolius funereus*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*
Mountain Goat *Oreamnos americanus*

Open Water

Fishes

Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*

Birds

Northern Pintail *Anas acuta*
Hooded Merganser *Lophodytes cucullatus*
Common Loon *Gavia immer*
Red-necked Grebe *Podiceps grisegena*
Western Grebe *Aechmophorus occidentalis*
Wilson's Phalarope *Phalaropus tricolor*
California Gull *Larus californicus*
Forster's Tern *Sterna forsteri*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*

Attachment 2.

From the Strategy: Appendix B, Rare and Declining Species

The following five pages are tables listing species in Idaho believed to be rare or declining. These assessments are based on best available scientific information and consider a variety of factors such as abundance, distribution, population trends, and threats.

Of the 1191 known species in Idaho, a total of 229 species (103 invertebrates, 126 vertebrates) were identified as rare and declining. (NOTE: The list contains 64 species in which more information is needed; therefore the list will be subject to change and more information is known regarding the abundance of a species and its range. It is anticipated that, as more information is known about a species and its abundance, the list of rare and declining species may decrease.)

The tables contain a series of ranking systems for each species, based on the best scientific knowledge from various sources. The rankings are as follows:

- **G Rank:** A rangewide ranking from 1 (critically imperiled) to 5 (widespread, abundant and secure).
- **S Rank:** A statewide ranking from 1 (critically imperiled) to 5 (widespread, abundant and secure).
- **ESA:** If the species is federally listed under the ESA as threatened or endangered.
- **FSR1:** Status as determined by the U.S. Forest Service, Region 1 (northern Idaho) for sensitive species (S) or listed threatened or endangered species (T/E) on Forest Service lands.
- **FSR4:** Status as determined by the U.S. Forest Service, Region 4 (southern Idaho) for sensitive species (S) or listed threatened or endangered species (T/E) on Forest Service lands.
- **BLM:** Sensitive species on BLM lands in Idaho ranging from Type 1 (threatened, endangered, proposed or candidate) to Type 5 (a "watch list," needing more information before a status determination can be made.)
- **IDFG Classification:** Classification of species based on State law. Idaho Code allows the Idaho Fish and Game Commission to classify wildlife and restrict take.

Appendix B: COMMON AND SCIENTIFIC NAMES OF IDAHO SPECIES OF GREATEST CONSERVATION NEED.									
Taxa	GRank	SRank	ESA	FSR1	FSR4	BLM	IDFG Classification		
Species with Substantial Information Pertaining to Status in Idaho									
LAMPREYS									
Pacific Lamprey <i>Lampetra tridentata</i>	G5	S1		S		TYPE 2	Endangered Species		
RAY-FINNED FISHES									
White Sturgeon (Snake River system) <i>Acipenser transmontanus</i>	G4	S1				TYPE 2	Game Fish		
White Sturgeon (Kootenai River system) <i>Acipenser transmontanus</i>	G4T1	S1	LE			TYPE 1	Game Fish; Endangered Species		
Northern Leatherside Chub <i>Lepidomeda copei</i>	G1G2	S2				TYPE 3	Protected Nongame Species		
Bonneville Cutthroat Trout <i>Oncorhynchus clarki</i> Utah	G4T4	S3		S		TYPE 2	Game Fish		
Yellowstone Cutthroat Trout <i>Oncorhynchus clarki</i> bouvieri	G4T2	S2		S		TYPE 2	Game Fish		
Westslope Cutthroat Trout <i>Oncorhynchus clarki</i> lewisi	G4T3	S3		S		TYPE 2	Game Fish		
Inland Redband Trout <i>Oncorhynchus mykiss</i> gairdneri	G5T4	S4		S		TYPE 2	Game Fish		
Steelhead (Snake River basin) <i>Oncorhynchus mykiss</i> gairdneri	G5T2T3	S3	LT			TYPE 1	Game Fish; Threatened Species		
Sockeye Salmon (Snake River) <i>Oncorhynchus nerka</i>	G5T1	S1	LE		E	TYPE 1	Game Fish; Endangered Species		
Kokanee <i>Oncorhynchus nerka</i>	G5	S2					Game Fish		
Chinook Salmon (Snake River fall-run) <i>Oncorhynchus tshawytscha</i>	G5T1	S1	LT		T	TYPE 1	Game Fish; Threatened Species		
Chinook Salmon (Snake River spring/summer-run) <i>Oncorhynchus tshawytscha</i>	G5T1	S1	LT	S	T	TYPE 1	Game Fish; Threatened Species		
Bear Lake Whitefish <i>Prosopium abyscicola</i>	G1	S1				TYPE 2	Game Fish		
Bonneville Cisco <i>Prosopium gammifer</i>	G1	S1				TYPE 2	Game Fish		
Bonneville Whitefish <i>Prosopium spilonidus</i>	G3	S3	LT		S	TYPE 1	Game Fish; Threatened Species		
Bull Trout <i>Salvelinus confluentus</i>	G5	S1		S		TYPE 3	Game Fish; Endangered Species		
Burbul Loia <i>Iota</i>	G1	S1				TYPE 2	Protected Nongame Species		
Bear Lake Sculpin <i>Cottus extensus</i>	G2	S2			S	TYPE 2	Protected Nongame Species		
Shoshone Sculpin <i>Cottus greeni</i>	G2	S2				TYPE 2	Protected Nongame Species		
Wood River Sculpin <i>Cottus leiopomus</i>	G2	S2				TYPE 2	Protected Nongame Species		
AMPHIBIANS									
Woodhouse's Toad <i>Bufo woodhousii</i>	G5	S2				TYPE 3	Protected Nongame Species		
Columbia Spotted Frog (populations south of the Snake River) <i>Rana lateralis</i>	G4T2T3	S2	C		S	TYPE 1	Protected Nongame Species		
Northern Leopard Frog <i>Rana pipiens</i>	G5	S2				TYPE 2	Protected Nongame Species		
Idaho Giant Salamander <i>Dicamptodon aterrimus</i>	G3	S3				TYPE 3	Protected Nongame Species		
Coeur d'Alene Salamander <i>Plethodon idahoensis</i>	G4	S2		S		TYPE 3	Protected Nongame Species		
REPTILES									
Northern Alligator Lizard <i>Elegania coerulea</i>	G5	S2				TYPE 4/TYPE 5	Protected Nongame Species		
Great Basin Collared Lizard <i>Crotaphytus bicinctores</i>	G5	S1				TYPE 3	Protected Nongame Species		
Ring-necked Snake <i>Diadophis punctatus</i>	G5	S2		S		TYPE 5	Protected Nongame Species		
Long-nosed Snake <i>Rhinocheilus lecontei</i>	G5	S2				TYPE 3	Protected Nongame Species		
Groundsnake <i>Sonora semiannulata</i>	G5	S2				TYPE 3	Protected Nongame Species		
BIRDS									
Trumpeter Swan <i>Cygnus buccinator</i>	G4	S1B,S2N			S	TYPE 3	Game Bird		
Northern Pintail <i>Anas acuta</i>	G5	S5B,S2N					Game Bird		
Lesser Scaup <i>Aythya affinis</i>	G5	S3					Game Bird		
Harlequin Duck <i>Histrionyx histrioides</i>	G4	S1B		S	S	TYPE 4	Game Bird		
Hooded Merganser <i>Lophodytes cucullatus</i>	G5	S2B,S3N					Game Bird		
Greater Sage-Grouse <i>Centrocercus urophasianus</i>	G4	S2			S	TYPE 2	Game Bird		
Sharp-tailed Grouse <i>Tympanuchus phasianellus</i>	G4T3	S1			S	TYPE 3	Game Bird		
Mountain Quail <i>Oreortyx pictus</i>	G5	S1		S	S	TYPE 3	Game Bird		
Common Loon <i>Gavia immer</i>	G5	S1B,S2N		S	S		Protected Nongame Species		
Red-necked Grebe <i>Podiceps grisegena</i>	G5	S2B					Protected Nongame Species		
Western Grebe <i>Aechmophorus occidentalis</i>	G5	S2B					Protected Nongame Species		

Taxa	GRank	SRank	ESA	FSR1	FSR4	BLM	IDFG Classification
Clark's Grebe <i>Aechmophorus clarkii</i>	G5	S2B					Protected Nongame Species
American White Pelican <i>Pelecanus erythrorhynchos</i>	G3	S1B				TYPE 2	Protected Nongame Species
Great Egret <i>Ardea alba</i>	G5	S1B					Protected Nongame Species
Snowy Egret <i>Egretta thula</i>	G5	S2B					Protected Nongame Species
Cattle Egret <i>Bubulcus ibis</i>	G5	S2B					Protected Nongame Species
Black-crowned Night-Heron <i>Nycticorax nycticorax</i>	G5	S2B					Protected Nongame Species
White-faced Ibis <i>Plegadis chihli</i>	G5	S2B				TYPE 4	Protected Nongame Species
Bald Eagle <i>Haliaeetus leucocephalus</i>	G4	S3B,S4N	LT		T	TYPE 1	Threatened Species
Swainson's Hawk <i>Buteo swainsoni</i>	G5	S3B				TYPE 5	Protected Nongame Species
Ferruginous Hawk <i>Buteo regalis</i>	G4	S3B				TYPE 3	Protected Nongame Species
Merlin <i>Falco columbarius</i>	G5	S2B,S2N					Threatened Species
Peregrine Falcon <i>Falco peregrinus</i>	G4T3	S2B		S	S	TYPE 3	Game Bird
Sandhill Crane <i>Grus canadensis</i>	G5	S3B					Protected Nongame Species
Black-necked Stilt <i>Himantopus mexicanus</i>	G5	S3B					Protected Nongame Species
American Avocet <i>Recurvirostra americana</i>	G5	S5B				TYPE 5	Protected Nongame Species
Long-billed Curlew <i>Numenius americanus</i>	G5	S2B				TYPE 5	Protected Nongame Species
Wilson's Phalarope <i>Phalaropus tricolor</i>	G5	S3B					Protected Nongame Species
Franklin's Gull <i>Larus pipixcan</i>	G4G5	S2B					Protected Nongame Species
California Gull <i>Larus californicus</i>	G5	S2B,S3N					Protected Nongame Species
Caspian Tern <i>Sterna caspia</i>	G5	S2B					Protected Nongame Species
Forster's Tern <i>Sterna forsteri</i>	G5	S1B					Protected Nongame Species
Black Tern <i>Chlidonias niger</i>	G4	S1B				TYPE 3	Protected Nongame Species
Yellow-billed Cuckoo <i>Coccyzus americanus</i>	G5	S2B	C			TYPE 1	Protected Nongame Species
Flammulated Owl <i>Otus flammeolus</i>	G4	S3B		S	S	TYPE 3	Protected Nongame Species
Burrowing Owl <i>Athene cunicularia</i>	G4	S2B				TYPE 5	Protected Nongame Species
Short-eared Owl <i>Asio flammeus</i>	G5	S4				TYPE 5	Protected Nongame Species
Boreal Owl <i>Aegolius funereus</i>	G5	S2			S	TYPE 5	Protected Nongame Species
Black Swift <i>Cypseloides niger</i>	G4	S1B		S		TYPE 4	Protected Nongame Species
Lewis's Woodpecker <i>Melanerpes lewis</i>	G4	S3B				TYPE 3	Protected Nongame Species
White-headed Woodpecker <i>Picoides albolarvatus</i>	G4	S2		S	S	TYPE 4	Protected Nongame Species
American Three-toed Woodpecker <i>Picoides dorsalis</i>	G5	S2			S		Protected Nongame Species
Pygmy Jay <i>Gymnorhinus cyanocephalus</i>	G5	S1				TYPE 5	Protected Nongame Species
Juniper Titmouse <i>Baeolophus inornatus</i>	G5	S2					Protected Nongame Species
Pygmy Nuthatch <i>Sitta pygmaea</i>	G5	S1		S		TYPE 5	Protected Nongame Species
Virginia's Warbler <i>Vermivora virginiae</i>	G5	S1B				TYPE 5	Protected Nongame Species
Brewer's Sparrow <i>Spizella breweri</i>	G5	S3B				TYPE 3	Protected Nongame Species
Grasshopper Sparrow <i>Ammodramus savannarum</i>	G5	S2B				TYPE 5	Protected Nongame Species
Blue Grosbeak <i>Passerina caerulea</i>	G5	S1B					Protected Nongame Species
Black Rosy-Finch <i>Leucosticte atrata</i>	G4	S3					Protected Nongame Species
South Hills Crossbill <i>Loxia sp. [undescribed]</i>	GNR	S1					Protected Nongame Species
White-winged Crossbill <i>Loxia leucoptera</i>	G5	S1					Protected Nongame Species
Lesser Goldfinch <i>Carduelis psaltria</i>	G5	S2B					Protected Nongame Species
MAMMALS							
Merriam's Shrew <i>Sorex merriami</i>	G5	S2					Unprotected Wildlife
Coast Mole <i>Scapanus oratus</i>	G5	S2				TYPE 4	Unprotected Wildlife
Fringed Myotis <i>Myotis thysanodes</i>	G4G5	S2		S		TYPE 3	Protected Nongame Species
Spotted Bat <i>Euderma maculatum</i>	G4	S3		S	S	TYPE 3	Protected Nongame Species
Townsend's Big-eared Bat <i>Corynorhinus townsendii</i>	G4	S3		S	S	TYPE 3	Protected Nongame Species
Pygmy Rabbit <i>Brachylagus idahoensis</i>	G4	S2			S	TYPE 2	Upland Game Animal
Cliff Chippingmunk <i>Neotamias dorsalis</i>	G5	S1				TYPE 4	Protected Nongame Species
Northern Idaho Ground Squirrel <i>Spermophilus brunneus brunneus</i>	G2T2	S1	LT		S	TYPE 1	Threatened Species
Southern Idaho Ground Squirrel <i>Spermophilus brunneus endemicus</i>	G2T2	S1	C		S	TYPE 1	Protected Nongame Species
Great Basin Ground Squirrel <i>Spermophilus mollis</i>	G5	S2				TYPE 3	Protected Nongame Species
Rock Squirrel <i>Spermophilus variegatus</i>	G5	S1				TYPE 5	Protected Nongame Species

Taxa	GRank	SRank	ESA	FSR1	FSR4	BLM	IDFG Classification
Townsend's Pocket Gopher <i>Thomomys townsendii</i>	G4G5	S2					Unprotected Wildlife
Phon Mouse <i>Peromyscus truei</i>	G5	S1					Unprotected Wildlife
Gray Wolf <i>Canis lupus</i>	G4	S3	LE/XN	E		TYPE 1	Big Game Animal
Grizzly or Brown Bear <i>Ursus arctos</i>	G4	S1	LT	T		TYPE 1	Threatened Species
Fisher Marten <i>martens</i>	G5	S1		S		TYPE 3	Furbearing Animal
Wolverine <i>Gulo gulo</i>	G4T4	S2		S		TYPE 3	Protected Nongame Species
Canada Lynx <i>Lynx canadensis</i>	G5	S1	LI	S		TYPE 1	Furbearing Animal, Threatened Species
Caribou Rangifer <i>tarandus</i>	G5T4	S1	LE				Endangered Species
Mountain Goat <i>Oreamnos americanus</i>	G5	S2					Big Game Animal
Bighorn Sheep (populations south of the Snake River) <i>Ovis canadensis</i>	G4T1	S1				TYPE 3	Big Game Animal
BIVALVES							
California Floater <i>Anodonta californiensis</i>	G3	S2				TYPE 3	
Western Ridged Mussel <i>Gonidea angulata</i>	G3	S2					
Western Pearshell <i>Margaritifera falcata</i>	G4	S3					
GASTROPODS							
Green River Pebblesnail <i>Fluminicola coloradoensis</i>	G2	S2					
Bruneau Hot Springsnail <i>Pyrgulopsis bruneauensis</i>	G1	S1	LE			TYPE 1	
Bear Lake Springsnail <i>Pyrgulopsis plibryana</i>	G2	S2					
A Springsnail <i>Pyrgulopsis robusta</i>	G2G3	S1				TYPE 1	
Pristine Pyrg <i>Pisidicola nemophili</i>	G3	S2					
Bliss Rapids Snail <i>Taylorconcha serpenticola</i>	G1	S1	LT			TYPE 1	
Desert Valvata <i>Valvata utahensis</i>	G1	S1	LE			TYPE 1	
Rustic Pondsnail <i>Stagnicola hinkleyi</i>	G2	S1					
Shortsipra Pondsnail <i>Stagnicola idahoensis</i>	G1	S1					
Mountain Marshsnail <i>Stagnicola montanensis</i>	G3	S1					
Shorface Larx <i>Fisherella nuttalli</i>	G2	S2				TYPE 2	
Barbury Springs Limpet <i>Larx</i> sp. [undescribed]	G1	S1	LE			TYPE 1	
Snake River Physa <i>Physa nathana</i>	G1	S1	LE			TYPE 1	
Western Flat-whorl <i>Planogyra clappi</i>	G3G4	S1					
Fir Pinwheel <i>Radiodiscus abietum</i>	G3	S2					
Salmon Coil <i>Helicodiscus salomonacelus</i>	G1G2	S2					
Nimapuna <i>Tigersnail Anguispira nimapuna</i>	G1	S1				TYPE 2	
Marbled Disc <i>Discus marmoratus</i>	G1G3	S1					
Pygmy Slug <i>Kootenala burkei</i>	G1G2	S2					
Pale Jumping-slug <i>Hemphillia carmelus</i>	G3G4	S2					
Smoky Taildropper <i>Prophysaon humile</i>	G1G2	S2					
Sheathed Slug <i>Zacoleus idahoensis</i>	G3G4	S2					
Lyre Mantleslug <i>Udoeasx lyrata</i>	G2	S1					
Thinlip Tightcoil <i>Pisidoma idahoense</i>	G2	S1					
Selway Forestsnail <i>Allogona lombardi</i>	G1	S1					
Dry Land Forestsnail <i>Allogona ptychophora solida</i>	G3G4T2T3	S1					
Mission Creek Oregonian <i>Cryptomastix magnidentata</i>	G1	S1				TYPE 2	
An Oregonian <i>Cryptomastix mullanti blandi</i>	G3G4T1	SNR					
River of No Return Oregonian <i>Cryptomastix mullanti clappi</i>	G3G4T1	SNR					
An Oregonian (Lower Salmon River) <i>Cryptomastix mullanti laljabris</i>	G3G4T1	SNR					
An Oregonian (Lower Clearwater River) <i>Cryptomastix mullanti tuckeri</i>	G3G4T1	SNR					
Salmon Oregonian <i>Cryptomastix harfordiana</i>	G3G4	S1					
An Oregonian (Hells Canyon) <i>Cryptomastix populi</i>	G2	S1					
Humped Coin <i>Polygyrella polygyrella</i>	G2G3	S2					
Lyrate Mountainsnail <i>Oreohelix haydeni</i>	G2G3	S1					
Costate Mountainsnail <i>Oreohelix idahoensis</i>	G1G2	S2				TYPE 2	
Deep Slide Mountainsnail <i>Oreohelix internum</i>	G1	S1					
Boulder Pile Mountainsnail <i>Oreohelix jugalis</i>	G1	S1				TYPE 3	

Taxa	GRank	SRank	ESA	FSR1	FSR4	BLM	IDFG Classification
Sriate Mountainsnail <i>Oreohelix strigosa goniohyra</i>	G5T1	S1				TYPE 2	
Whorled Mountainsnail <i>Oreohelix vortex</i>	G1G3	S1				TYPE 2	
Lava Rock Mountainsnail <i>Oreohelix walloni</i>	G1G3	S1				TYPE 2	
ARACHNIDS							
A Cave Obligate Mite <i>Flabellorhagidia pecki</i>	G1G2	S1					
A Cave Obligate Harvestman <i>Speleomaster lexi</i>	G1G2	S1					
A Cave Obligate Harvestman <i>Speleomaster pecki</i>	G1G2	S1					
INSECTS							
A Mayfly <i>Cautinella idahoensis</i>	G1G3	S2					
A Mayfly <i>Anetropus amnophilus</i>	G3G4	S1					
A Mayfly <i>Centropilum selandorum</i>	G1	S1					
A Spur-throat Grasshopper <i>Melanoplus idaho</i>	G1G2	S1					
A Stonefly <i>Capnia zuckei</i>	G2	S1					
A Stonefly <i>Sovedina pottieri</i>	G3	S1					
A Stonefly <i>Pictetiella expansa</i>	G3	S2					
Columbia River Tiger Beetle <i>Cicindela columbica</i>	G2	S1				TYPE 2	
St. Anthony Dune Tiger Beetle <i>Cicindela arenicola</i>	G1G2	S2				TYPE 2	
A Tiger Beetle <i>Cicindela pitorica</i>	G3	S3					
Bruneau Tiger Beetle <i>Cicindela waynei</i>	G1	S1				TYPE 2	
Blind Cave Leiclid Beetle <i>Glacivicolia bathyscioides</i>	G1G3	S1				TYPE 2	
An Agapetus Caddisfly <i>Agapetus montanus</i>	G2?	S1					
Species Lacking Essential Information Pertaining to Status in Idaho							
RAY-FINNED FISHES							
Lake Chub <i>Couesius plumbeus</i>	G5	SNR					Unprotected Wildlife
Unspotted Dace <i>Rhinichthys unatilla</i>	G4	SNR					Unprotected Wildlife
Leopard Dace <i>Rhinichthys falcatus</i>	G4	SNR					Unprotected Wildlife
Bluehead Sucker <i>Catostomus discobolus</i>	G4	SNR					Unprotected Wildlife
Pygmy Whitefish <i>Prosopium coulteri</i>	G5	SNR					Game Fish
Sand Roller <i>Percoptis transmontana</i>	G4	SH				TYPE 3	Protected Nongame Species
AMPHIBIANS							
Wood Frog <i>Rana sylvatica</i>	G5	SH				TYPE 5	Protected Nongame Species
BIRDS							
Upland Sandpiper <i>Bartramia longicauda</i>	G5	S1B				TYPE 4	Protected Nongame Species
MAMMALS							
Pygmy Shrew <i>Sorex hoyi</i>	G5	S1					Unprotected Wildlife
Dwarf Shrew <i>Sorex nanus</i>	G4	S2					Unprotected Wildlife
California Myotis <i>Myotis californicus</i>	G5	S2				TYPE 4	Protected Nongame Species
Utah Chipmunk <i>Neotamias umbrinus</i>	G5	S1				TYPE 4	Protected Nongame Species
Red-tailed Chipmunk <i>Neotamias ruficaudus</i>	G5	S3					Protected Nongame Species
Columbia Plateau Ground Squirrel <i>Spermophilus canus</i>	G4	S1				TYPE 4	Protected Nongame Species
Wyoming Ground Squirrel <i>Spermophilus elegans</i>	G5	S3				TYPE 4	Protected Nongame Species
Idaho Pocket Gopher <i>Thomomys idahoensis</i>	G4	S3					Unprotected Wildlife
Little Pocket Mouse <i>Perognathus longimembris</i>	G5	S1				TYPE 4	Unprotected Wildlife
Dark Kangaroo Mouse <i>Microdipodops megacephalus</i>	G5	S1				TYPE 4	Unprotected Wildlife
Northern Bog Lemming <i>Synaptomys borealis</i>	G4	S1		\$		TYPE 4	Protected Nongame Species
Kit Fox <i>Vulpes macrotis</i>	G4	S1					
GASTROPODS							

Taxa	GRank	SRank	ESA	FSR1	FSR4	BLM	IDFG Classification
<i>Pixia pebblesnail Fluminicola minutissimus</i>	G1	SH					
<i>Cloaked Physa Physa megalochlamys</i>	G3	S1					
<i>Idaho Vertigo Vertigo idahoensis</i>	G1G2	SH					
<i>Magnum Mantleslug Magnipelta mycophaga</i>	G2G3	SH					
<i>Shiny Tighlcoat Plistioma wascoense</i>	G2	SH					
<i>Kingston Oregonian Cryptomastix sanburni</i>	G2G3	SH					
<i>Thin-ribbed Mountainsnail Oreochelix tenuistriata</i>	G1	SH					
<i>Seven Devils Mountainsnail Oreochelix hammeri</i>	G1	S1					
CRUSTACEANS							
<i>Idaho Amphipod Stygobromus idahoensis</i>	G1G2	S1					
INSECTS							
<i>A Mayfly Ameletus sparsatus</i>	G3G4	S2					
<i>A Mayfly Ameletus suffusus</i>	G2G4	S1					
<i>A Mayfly Ameletus lolae</i>	G1G3	S1					
<i>A Mayfly Paraleptophlebia jenseni</i>	G2G4	S1					
<i>A Mayfly Paraleptophlebia traverae</i>	GH	SH					
<i>A Mayfly Paraleptophlebia vaciva</i>	G2G4	S1					
<i>A Mayfly Chrygma dimicki</i>	G1G3	S1					
<i>A Mayfly Parametelus columbiae</i>	G2	S1					
<i>A Mayfly Asioptax edmundsi</i>	G3	S1					
<i>Sagebrush Spur-throat Grasshopper Melanoplus artemesiaae</i>	G1G3	S1					
<i>A Spur-throat Grasshopper Melanoplus daemon</i>	G1G2	S1					
<i>A Spur-throat Grasshopper Melanoplus digilifer</i>	G2G3	S2					
<i>A Spur-throat Grasshopper Melanoplus payettii</i>	G2G4	S2					
<i>A Spur-throat Grasshopper Melanoplus lemhiensis</i>	G1G2	S1					
<i>A Spur-throat Grasshopper Melanoplus paopyrae</i>	G1G2	S1					
<i>A Spur-throat Grasshopper Melanoplus salmonis</i>	G1G3	S1					
<i>A Spur-throat Grasshopper Melanoplus trigeminus</i>	G1G2	S1					
<i>Idaho Point-headed Grasshopper Acrolophus pulchellus</i>	G1G3	S1				TYPE 2	
<i>A Grasshopper Aglaia armissuli</i>	G1G3	S1					
<i>A Grasshopper Aglaia keithi</i>	G1G3	S1					
<i>A Grasshopper Aglaia militaris</i>	G3G4	S2					
<i>A Grasshopper Barracris potraea</i>	G37	S2					
<i>A Stonefly Bolshenapnia milani</i>	G3	S1					
<i>A Stonefly Capnia lineata</i>	G3	S1					
<i>A Stonefly Ulacania nedia</i>	G3	S1					
<i>A Stonefly Perlomyia collaris</i>	G3	S1					
<i>A Stonefly Megaleuctra kincaidii</i>	G2	S1					
<i>A Spring Stonefly Malenka lina</i>	G3	S2					
<i>A Stonefly Zapada cordillera</i>	G3	S1					
<i>A Stonefly Taenionema umatilla</i>	G3	S1					
<i>A Stonefly Sweltsa gaudini</i>	G3	S1					
<i>A Spring Stonefly Cascadopelia trictura</i>	G3G4	S1					
<i>A Stonefly Isoperla bifurcata</i>	G3	S1					
<i>Relict Frillilay Boloria triemhild</i>	G3G4	S2					
<i>Gillette's Checkerspot Euphydryas gillettii</i>	G2G3	S3					